

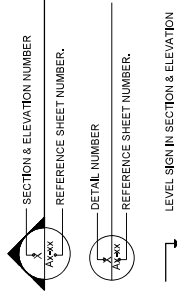
WASH AND BUILDING INFRA-STRUCTURE IN SUDAN

A05 SD 019 / WV SUDAN / SDBLN/11/21

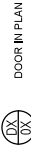
VIP-LATRINE - FOUR DOORS UNIT (LAT-4)

ARCHITECTURAL DRAWINGS

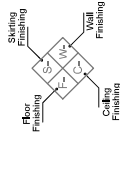
SYMBOLS



FALSE CEILING LEVEL
FROM F.F.L



FINISH NOTATION IN ELEVATION



ABBREVIATION

- NTS - NOT TO SCALE
F.F.L - FINISH FLOOR LEVEL
C.L - CONCRETE LEVEL
T.O.S - TOP OF SLAB
T.O.P - TOP OF PARAPET
T.O.R - TOP OF ROOF
S.W.L - SIDE WALK LEVEL
A.S.L - AGRICULTURE SOIL LEVEL
R.L - ROAD LEVEL
C/L - CENTER LINE
C/C - CENTER TO CENTER
DIA - DIAMETER
DIM - DIMENSION
R.C - REINFORCED CONCRETE

GENERAL NOTES

- UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN MILLIMETERS.
- PROJECT LEVEL 4000 EXISTING MAIN ASPHALT ROAD AT MAIN ENTRANCE. LEVELS ON SITE TO BE DETERMINED BY THE SITE ENGINEER.
- ALL DRAWINGS SHALL NOT BE SCALED. ONLY WRITTEN DIMENSION SHALL BE FOLLOWED.
- ANY DRAWINGS FOR ALL TRADES SHALL BE READ IN CONJUNCTION FOR PROPER COORDINATION.
- ANY INCONSISTENCY OR DISCREPANCY IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCEMENT OF THE WORK.
- THE FOLLOWING CLAUSE SHALL BE READ AFTER ALL MENTIONED MANUFACTURERS' NAMES OR AN EQUAL APPROVED BY THE ENGINEER.
- ALL SHAPES AND COLORS SHOULD BE FINALLY APPROVED ON SITE ACCORDING TO THE SUBMITTED SAMPLES AND TO BE APPROVED BY OWNER.
- ALL EXPOSED CONCRETE EDGES SHOULD BE CHAMFERED 22mm.
- ALL DOORS OF KITCHENS, BATHROOMS, TOILETS, BALCONIES, SERVICE ROOMS & EXTERNAL DOORS SHOULD HAVE 3mm THICK GRANITE THRESHOLD EXPOSED EDGES SHALL BE PENCIL ROUNDED.
- ALL PLASTERED WALL CORNERS SHALL HAVE GALVANIZED STEEL BEADS.
- ALL JOINTS BETWEEN REINFORCED CONCRETE AND BRICK WORK WALL SHALL HAVE A MINIMUM OF 20mm EXPANDED METAL MESH.
- ALL EXPOSED CEMENT SAND SCREENED FLOORING SHOULD BE TREATED WITH A LIQUID BASED SODIUM SILICATE SOLUTION TO PROVIDE HARDNESS, DUST PROOFING & OIL PROOFING UNLESS NOTED OTHERWISE.
- ALL CEMENT AND SAND SCREENED FLOORS WHICH ARE TO RECEIVE FLOOR COVERINGS SHALL BE TREATED WITH A LEVELING COMPOUND.
- THE GRANITE FLOORING SHALL HAVE A PENETRATIVE SEALANT SURFACE COATING FORMULATED FROM HIGH PERFORMANCE NON YELLOWING RESINS & SOLVENTS, ALL BACK SURFACES SHALL BE COATED WITH APPROVED QUALITY SEALANT.
- OPENINGS SHOULD HAVE REINFORCED CONCRETE LINTELS & SILLS.
- ALL BRICK WALLS TO SERVICE SHAFTS ENCLOSURES SHALL BE PLASTER ONLY, NO PAINT IS REQUIRED, UNLESS OTHERWISE NOTED.
- ALL EXPOSED STRUCTURAL STEEL WORK TO BE FINISHED WITH RED OXIDE PRIMER AND THREE COATS OF GLOSSY SYNTHETIC ENAMEL PAINT. THE PRIMER SHALL BE SPECIAL ANTI-CORROSIVE TYPE.
- ALL ACCESSIBLE SERVICE SHAFTS SHALL BE PROVIDED WITH STEEL GRATING PLATFORMS.
- FOR FIRE HOSE CABINETS, F.H.C'S, WET SERVICE ROOMS, BATHROOMS, BALCONIES, TOILETS, KITCHENS & SHAFT FLOORS SHOULD HAVE TWO LAYERS OF COLD APPLIED BITUMINOUS WATER PROOFING OVER CONCRETE SLAB.
- ALL ELECTRICAL ROOMS CLOSET THAT HAVE COMMON WALLS WITH WET MECHANICAL SHAFTS OR SPACE, SHALL HAVE THESE WALLS TREATED WITH A WATERPROOFING MEMBRANE SPECIFIED.
- ALL F.H.C'S SHALL HAVE " 1200x1200mm, " POWDER COATED ALUMINUM GLASS OPENINGS.
- ALL TIMBER WORK TO BE CONSISTED OF FIRST GRADE HARD TEAK WOOD, CLEAN, WELL-SEASONED AND TREATED WITH APPROPRIATE, CHEMICAL PRESERVATIVES AND OBTAINED FROM AN APPROVED SOURCE.
- ALL CHECKERED PLATE LOCATED ON PLANS ARE SCHEMATIC. THE CONTRACTOR SHALL INSTALL TO THE ENGINEER FOR APPROVAL.
- ALL SHAFTS AT BASE LEVEL TO BE BLOCKED WITH CONCRETE AFTER INSTALLATION.
- THE CONTRACTOR SHALL LAY HORIZONTAL GALVANIZED STEEL REINFORCEMENT STRIPS AT EACH SECOND COURSE OF BRICK WALL.
- ALL HANDRAILS AND GUARDRAILS SHALL MEET OSHA REQUIREMENT TO BE CAPABLE OF WITHSTANDING
- A LOAD OF AT LEAST 150 kg APPLIED AT ANY POINT ON THE RAIL AND IN ANY DIRECTION.
- ALL EXTERNAL DOORS TO HAVE 3 mm, THICK GRANITE SADDLE OF WHICH 13mm. OUT PROJECTION, ALL EDGES SHALL BE TRULY ROUNDED.
- CONSTRUCTION JOINTS AT ADEQUATE LOCATION FOR FLOORS SLABS & WALLS SHALL BE SUGGESTED BY THE CONTRACTOR & APPROVED BY THE ENGINEER
- ALL CONSTRUCTION JOINTS TO BE SEALED BY ELASTIC EPOXY SEALANT
- ALL DOOR FRAMES TO BE AT 10 cm. FROM ADJACENT WALL UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL LAY HORIZONTAL GALVANIZED STEEL REINFORCEMENT STRIPS AT EACH SECOND COURSE OF BLOCK WALL
- DURING CONSTRUCTION & FOR ALL UNDER GROUND WORKS, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEWATERING SYSTEM DUE TO INFILTRATION OF WATER, OR AS DESCRIBED IN THE SOIL REPORT; HOWEVER THE CONTRACTOR SHALL INVESTIGATE THE SITUATION UPON THE SITE HANDING-OVER TO HIM & SHALL DO HIS OWN RESEARCH & TESTS & HE WILL BE HELD RESPONSIBLE FOR THE ACTUAL & FUTURE SITUATION DUE TO THE POSSIBLE RISE OF GROUND WATER LEVEL.
- SAMPLES FROM THREE DIFFERENT SUPPLIERS SHALL BE ALWAYS SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.



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NOTES :-

1. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN METER FROM FLOOR FINISH.
3. PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.
4. ALL WORKS ARE TO BE CARRIED OUT TO CONSTRUCTION OF ALL OTHER RELEVANT CODES OF CONSTRUCTION.
- FLOOR TILES SHOULD BE REMBED BY CONTRACTOR ACCORDING TO ACTUAL DIMENSION ON SITE.
- R.L. ROAD LEVEL
- W.L. WALK LEVEL
- C.S. CONCRETE LEVEL
- F.F.L FINISHING LEVEL

CLIENT:-



WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WW SUDAN / SOBLN11/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE :-

BUILDING WORKS
FOUR DOORS LATRINE (LA-1-4)
ARCHITECTURAL WORKS
ARCHITECTURE NOTES AND SYMBOLS

DESIGNED BY:	DRAWN BY:	APPROVED BY:
SAE	HMS	SOM
DRAWING NO.		SHEET NO.
AE-LAT-4-001		1 OF 1
SCALE	REVISION NO.	DATE.
N.T.S	01	DECEMBER 2022

NOTES :-

1. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN METER FROM FLOOR FINISH.
3. PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.
4. ALL WORKS ARE TO BE CARRIED OUT TO CONFORM WITH RELEVANT CODES OF CONSTRUCTION.
5. FLOOR TILES SHOULD BE REMOVED BY CONTRACTOR ACCORDING TO ACTUAL DIMENSION ON SITE.
6. -R/L: ROAD LEVEL
7. -W/L: WALK LEVEL
8. -F.O.S: FINISH OF SLAB
9. -C.C: CONCRETE LEVEL
10. -F.F.L: FINISHING LEVEL

CLIENT:-

World Vision
WORLD VISION INTERNATIONAL - SUDAN

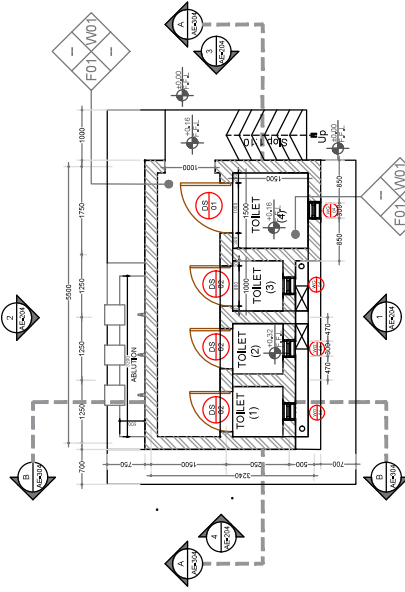
PROJECT :-

A05 SD 019 / WW SUDAN / SDBLN/11/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

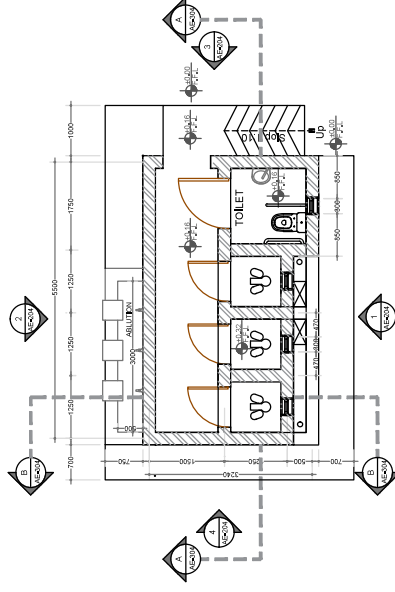
DRAWING TITLE :-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
ARCHITECTURAL WORKS
FLOOR PLAN

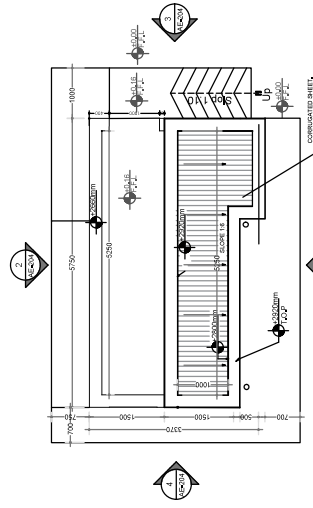
DESIGNED BY:	DRAWN BY:	APPROVED BY:
SAE	HMS	SOM
DRAWING NO.		SHEET NO.
AE-LAT-4-101		10F1
SCALE	REVISION NO.	DATE
1:100	01	DECEMBER 2022



UNIT(4)
GROUND FLOOR PLAN



UNIT(4)
GROUND FURNITURE PLAN



UNIT(4)
ROOF PLAN

MURTADA
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WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WW SUDAN / SDBLN/11/2021

WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE :-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
ARCHITECTURAL WORKS
ELEVATIONS

DESIGNED BY: DRAWN BY: APPROVED BY:

SAE HMS SOM

DRAWING NO. SHEET NO.

AE-LAT-4-201

1 OF 1

SCALE

REVISION NO.

DATE.

1:100

01

DECEMBER 2022

NOTES :-

1. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.

2. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN METER FROM FLOOR FINISH LEVEL UNLESS SPECIFICALLY STATED.

3. BUILDER TO CHECK ALL DIMENSIONS AT SITE PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.

4. ALL WORKS ARE TO BE CARRIED OUT TO CONSTRUCTION, REFER RELEVANT CODES OF CONSTRUCTION.

- FLOOR TILES SHOULD BE REMOVED BY CONTRACTOR ACCORDING TO ACTUAL DIMENSION ON SITE.

- R.L. ROAD LEVEL
- W.L. WALK LEVEL
- F.O.S. FOOTING SURFACE
- C.C. CONCRETE LEVEL
- F.F. FINISHING LEVEL

LEGEND :-

ELEVATION FINISH

1	WEATHER PROOF POLYURETHANE PAINT
2	SCHEMATIC SHEET, REFER TO ARCHITECTURAL SCHEDULES

01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DETAILED DRAFT
REV.	DATE	PURPOSE OF ISSUANCE

CLIENT:-

World Vision

WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WW SUDAN / SDBLN/11/2021

WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE :-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
ARCHITECTURAL WORKS
ELEVATIONS

DESIGNED BY: DRAWN BY: APPROVED BY:

SAE HMS SOM

DRAWING NO. SHEET NO.

AE-LAT-4-201

1 OF 1

SCALE

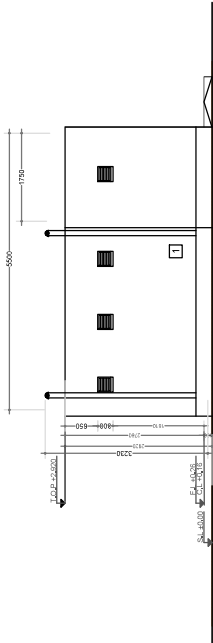
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DATE.

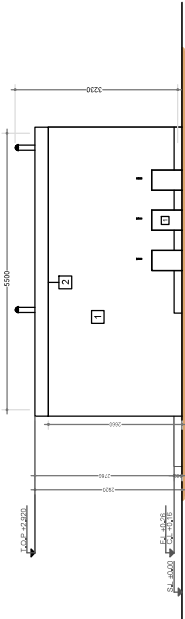
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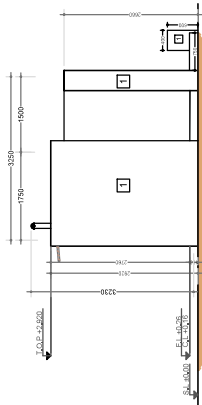
DECEMBER 2022



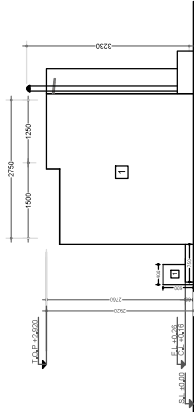
ELEVATION (1)



ELEVATION (2)



ELEVATION (3)

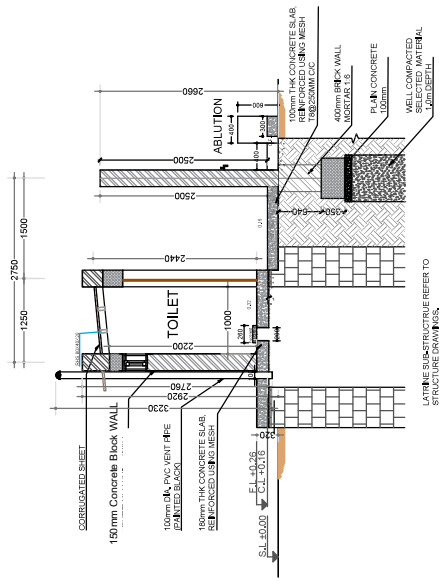
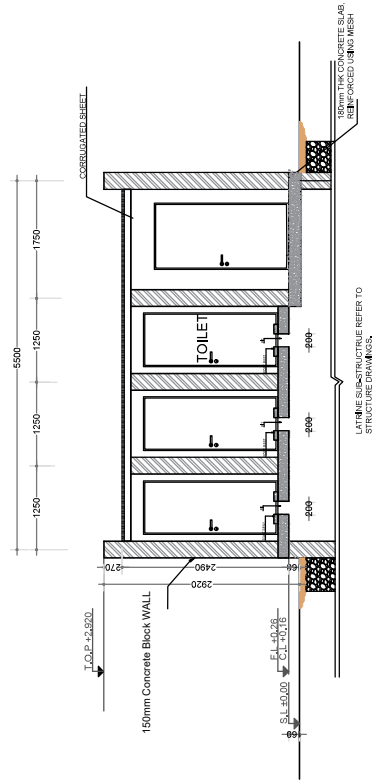


ELEVATION (4)

NOTES :-

1. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN METERS ABOVE GROUND FINISH, UNLESS OTHERWISE STATED.
3. BUILDER TO CHECK ALL DIMENSIONS AT SITE PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.
4. ALL WORKS ARE TO BE CARRIED OUT TO SUDAN AND OTHER RELEVANT CODES OF CONSTRUCTION.
5. FLOOR TILES SHOULD BE REVISED BY CONTRACTOR ACCORDING TO ACTUAL DIMENSION ON SITE.
6. -R.L. ROAD LEVEL
7. -W.L. WALK LEVEL
8. -F.O.S. FINISH OF SLAB
9. -C.O.S. CONCRETE LEVEL
10. -F.F.L. FINISHING LEVEL

SECTION A-A



PROJECT :-

A05 SD 019 / WW SUDAN / SDBLN/1/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE :-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
ARCHITECTURAL WORKS
SECTIONS

DESIGNED BY:	DRAWN BY:	APPROVED BY:
SAE	HMS	SOM
DRAWING NO.		SHEET NO.
AE-LAT-4-301		1 OF 1
SCALE	REVISION NO.	DATE.
1:75	01	DECEMBER 2022

TYPE	SIZE		DESCRIPTION	NUMBER	TOTAL
	W.	H.			
DS 01	1000 X 2000	ONE LEAF POWDER COATED STEEL HINGED DOOR, GALVANIZED STEEL FRAME (1,5mm THICK) AND LEAF SHEET (1,25mm THICK) SECURED DOOR, COMPLETE WITH: • HIDDEN HINGES, • DOOR STOPPER, • SECURED LOCK, • SOFT CLOSING.	1	1	
DS 02	800 X 2500		3	3	

SCHEDULE OF FINISHES					
FLOORS FINISH		WALL FINISHES		CEILING FINISHES	
MARK	DESCRIPTION	MARK	DESCRIPTION	MARK	DESCRIPTION
F01	"CEMENT FINISH" FINISH... SMOOTH-CEMENT FINISH. SIZE... — COLOR... GRAY. MANUFACTURER... REFER TO SCHEDULE OF PREFERRED PRODUCT AND MATERIALS FOR MANUFACTURERS. REMARKS... CONSIDER 150 M² TILES PER MATERIAL APPLICATION & SPECIFICATION TO EACH FLOOR APPROVAL.	W01	"INTERNAL PAINTING WALLS" FINISH... MATT FINISH (AST FEMULATION WALL PAINT) SIZE... — COLOR... TO BE SELECTED FROM MANUFACTURER'S STANDARD RANGE TO ARCHITECT'S APPROVAL MANUFACTURER... N.I.E. NATIONAL OR EQUIVALENT REMARKS... METHOD OF APPLICATION OF wall paint as per MANUFACTURERS WRITTEN INSTRUCTIONS. INCLUDED SANDING EVERY LAYERS. GRAB AND PROTECT AND ONE VERTICAL COAT OF SELECTED PAINT AND PROTECT IN VERT TO ARCHITECT'S APPROVAL.	C01	"CORRUGATED SHEETS " SIZE ... 0.6 MM THICK. COLOR... TO BE SELECTED FROM MANUFACTURERS STANDARD RANGE FOR ARCHITECT. MANUFACTURER... REFER TO SCHEDULE OF PREFERRED PRODUCT AND MANUFACTURER. REMARKS... METHOD OF INSTALLATION AS PER MANUFACTURERS WRITTEN INSTRUCTIONS.
		W02	"WEATHERPROOF POLYURETHANE PAINT" FINISH... POLYURETHANE PAINT SIZE... — COLOR... TO BE SELECTED FROM MANUFACTURERS STANDARD RANGE TO ARCHITECT'S APPROVAL MANUFACTURER... N.I.E. NATIONAL OR EQUIVALENT REMARKS... METHOD OF APPLICATION OF wall FINISH AS PER MANUFACTURERS WRITTEN INSTRUCTIONS. INCLUDED SANDING EVERY LAYERS. GRAB AND PROTECT AND ONE VERTICAL COAT OF SELECTED PAINT AND PROTECT IN VERT TO ARCHITECT'S APPROVAL.		

STRUCTURAL DRAWINGS

1 THE STRUCTURAL DRAWINGS ARE TO BE REFERRED FOR STRUCTURAL MEMBERS, SIZE AND REINFORCEMENT ARRANGEMENT, EXACT DIMENSIONS AND DETAILS AS PER ARCHITECTURAL DRAWINGS. IN CASE OF DISCREPANCIES REFER TO THE ENGINEER FOR CLARIFICATIONS PRIOR TO TAKING UP OF RELATED WORKS.

2 STRUCTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, ELECTRICAL, SANITARY AND A/C DRAWINGS. ANY DISCREPANCIES TO BE MADE IN CONCRETE TO HAVE PRIOR APPROVAL OF THE ENGINEER.

- 19 THE SOIL BEARING CAPACITY AT FOUNDATION LEVEL IS 200 KN/m²

2.1 DESIGNED MIX TO BS. 5328

- 2.1 DESIGNED MIX TO BS. 5328

NOMINAL MAXIMUM SIZE OF AGGREGATE 20mm.

	MAX No.	1	2	3
GRADE (BS. 8110)		C25	C30	C15
MIN. CEMENT CONTENT (kg/m ³)		275	275	275
MAX. CEMENT CONTENT (kg/m ³)		450	450	325
MAX. FREE W/C RATIO		0.85	0.85	0.65
SUMP (mm) AT SITE USING SUPER PLASTERIZER		150	150	79*

- * WITHOUT PLASTER/STUCCO
- | | |
|----------|--|
| MIX No.2 | - COLUMNS- FOUNDATION & FOUNDATION BEAMS |
| MIX No.1 | SUSPENDED SLABS, STAIRS, WALLS & SUSPENDED BEAMS |
| MIX No.2 | - SLAB ON GRADE |
| MIX No.3 | - BLINDING, MASS CONCRETE INFILL |

5.1 PERIPHERAL TIES:
—PROVIDE 2Y12 PERIPHERAL TIES AT EVERY EDGE OF THE BUILDING LAPPED WITH THE TOP REINFORCEMENT OF THE BEAMS
A DISTANCE AT LEAST 750mm.

- 5.1 PERIMETER TIES: PERIMETER TIES AT EVERY EDGE OF THE BUILDING LAPPED WITH THE TOP REINFORCEMENT OF THE BEAMS SHALL BE AT LEAST TWO INCHES.
- 5.2 INTERNAL TIES: THE TOP LAP LENGTH FOR SLAB REINFORCEMENT SHALL BE 600 OR 50 DIA. WHICHEVER IS GREATER.
- 5.3 COLUMN TIES: COLUMN TIES SHALL BE REINFORCED AT EVERY CORNER OF THE BUILDING ALL AROUND WITH THE TOP STEEL OF THE PERIMETER BEAM. DISTANCE AT LEAST EQUAL TO 150MM.
- 5.4 7/16 STANDARD HORIZONTAL BARS SHALL BE EXTENDED THROUGHOUT THE PERIPHERAL LENGTHS AT EVERY EXTERNAL AND AT 150MM AT EVERY INTERNAL CORNER. THE BARS SHALL BE LAPPED WITH TOP REINFORCEMENT OF THE ADJACING BEAMS DISTANCE AT LEAST EQUAL TO 150MM.
- 5.5 VERTICAL TIES: WALLS OF COLUAMNS AND PILES SHALL PROJECT A DISTANCE AT LEAST EQUAL TO 800MM OR 50 DIA. WHICHEVER IS GREATER. WALLS OF COLUAMNS AND PILES SHALL BE REINFORCED WITH TOP STEEL OF THE PERIMETER BEAM.

3.1 THE REINFORCEMENT USED TO R.C. WORKS ARE AS FOLLOWS:
 MARKED AS (V) OR (I) HIGH YIELD STRENGTH DEFORMED BARS WITH MINIMUM CHARACTERISTIC STRENGTH OF 460N/mm².
 STEEL REINFORCEMENT TO COMPLY WITH BS 4449, BS 4461, BS 4483 AND CUT AND BENT TO BS 4486.

- 3.1. THE REINFORCED ASH TO R.C. JOINTS ARE AS FOLLOWS:
MANUFACTURED AS (V) OR (U) HIGHLY STRENGTH EXTENDED BARS WITH MINIMUM CHARACTERISTIC STRENGTH OF 460N/mm².
REINFORCED TO COMPLY WITH BS 4449, BS 4448, BS 4443 AND BS 4446.
- 3.2. THE CLEAR COVER TO THE REINFORCEMENT INCLUDING LAPS IS AS FOLLOWS:
- TOP REINFORCEMENT IN ALL THE BEAMS & SUBSTRUCTURE COLUMNS = 50mm.
- TOP REINFORCEMENT IN ALL THE BEAMS & SUBSTRUCTURE COLUMNS = 50mm.
- EXTERIOR COLUMNS IN SUPERSTRUCTURE = 50mm.
- BEAMS = 50mm.
- EXTERIOR EXPOSED R.C. SURFACE = 40mm.
- 3.3. NO ADDITIONAL LAP IN MAIN REINFORCEMENT OF THE EXPOSED THE LAP LENGTH SHALL BE FOR TENSION AS WELL AS COMPRESSED BARS, EXCEPT WHERE SHOWN OTHERWISE.

MASONRY BLOCKS FOR LOAD BEARING WALLS SHALL BE SOLID BLOCKS HAVING MINIMUM CRUSHING STRENGTH OF 12.5 N/mm².
AND FOR NON LOAD BEARING WALLS SHALL BE HOLLOW BLOCKS WITH MINIMUM CRUSHING STRENGTH OF 7.5 N/mm².
UNLESS NOTED OTHERWISE (REFER TO ARCH. DWGS.)

- [illegible]

6.1 UNLESS OTHERWISE STATED, STRUCTURAL STEELWORK FOR STANDARD SECTIONS SHALL BE GRADE 43 TO BS 4360. BUILT-UP SECTIONS ARE MADE FROM HOT ROLLED PLATES CONFORMING TO ASTM A572M GRADE 50 (OR EQUIVALENT) HAVING A MINIMUM YIELD STRENGTH OF 34.3 KI/CM².

6.2 CONTRACTOR SHALL PREPARE SCALED COMPLETE FABRICATION DRAWINGS WITH THE SUPPORT OF DESIGN CALCULATIONS FOR THE APPROVAL OF THE ENGINEER.

- [illegible]

a) SAND BLASTED TO SA 2 1/2
b) ONE COAT EPICRIP M400 ZP EPOXY PRIMER
c) ONE COAT EPICRIP M400 ZP EPOXY PRIMER
(75 MICRONS)
d) ONE COAT EPICRIP L653T HBUILD
(125 MICRONS)
e) TWO COATS RESISTEX M137T SPECIAL FINISH
(50 MICRONS EACH COAT)

NOTE:

- COLOUR OF FINISH COAT TO BE SELECTED BY THE ARCHITECT.
COLOUR OF UNDERCOAT TO SUIT FINISH COAT COLOUR.
- 6.7 ALL ANCHOR BOLTS ARE HOT DIP GALVANIZED WITH MINIMUM YIELD STRENGTH 248 MPa.
6.8 ALL BOLTS SHALL BE OF GRADE 8.8.

(e) EXCAVATE THE TOP SOIL TO THE PROPOSED FOUNDATION LEVEL.

- (d) DOWNE THE TOP SOIL TO THE PROPOSED FOUNDATION LEVEL.
- (e) FLOOD THE SITE WITH WATER.
- (f) LEVEL AND COMPACT THE REVEALED SURFACE USING A HEAVY ROLLER COMPACTOR TO A MINIMUM OF 95 PROCTOR MAXIMUM DRY DENSITY.

MURTADA MAAZ
CONSULTANCY

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01	15/12/2022		FINAL DETAIL
00	07/04/2022		FINAL DETAIL
00	17/03/2022		DRAFT DETAIL
REV	DATE	PURPPOE OF ISSUANCE	

CLIENT:-



PROJECT :-

PROJECT :-

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN/11/2021

WASH AND BUILDING INFRA-STRUCTURE IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
CIVIL WORKS
GENERAL NOTES

DESIGNED BY:	AOM	DRAWN BY:	SSZ	APPROVED BY:	AAA
DRAWING NO.		S-LAT-5001		SHEET NO.	
				1 OF 1	
SCALE		REVISION NO.		DATE.	
N.T.S		01		DEC 08/2022	

CLIENT:-

A05 SD 019 / WV SUDAN / SDBLN/11/2021

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
CIVIL WORKS
STANDARD DETAILS

DESIGNED BY:	ACM	DRAWN BY:	SSZ	APPROVED BY:	AAA
DRAWING NO.		S-LAT-4402			
SCALE	REVISION NO.		DATE		
N.T.S	01		DECEMBER-2022		

A. TRIMMER BARS TO STRUCTURAL OPENINGS SHALL BE PROVIDED AS DETAILED HEREIN. DIAMETER OF TRIMMER BARS SHALL BE SIMILAR TO BIGGER REINFORCING BARS OF THE STRUCTURE THROUGH WHICH THE OPENING IS FORMED.

- C. UNLESS OTHERWISE SHOWN IN THE STRUCTURAL DRAWINGS, TRIMMING BARS DETAILS FOR THE DIFFERENT SIZE OPENINGS ARE AS SHOWN:

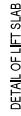


1. SHALL NOT BE LESS THAN NOS. OF BARS CUT BY OPENING.
2. MINIMUM 2 NOS. EACH FACE AND BAR DIAMETER (d) SHALL BE EQUAL TO THE GREATEST DIAMETER OF BARS CUT BY THE OPENING.
3. BOTH PERPENDICULAR AND DIAGONAL TRIMMING BARS SHALL BE PROVIDED AS SHOWN ABOVE AND ON EACH FACE OF THE STRUCTURE.

D. WHEN THE DISTANCE BETWEEN OPENINGS IS LESS THAN 1.5 TIMES THE WIDTH OF THE LARGEST OPENING, THE GROUP SHALL BE TREATED AS A SINGLE OPENING WITH AN EFFECTIVE WIDTH AND LENGTH AS SHOWN:



- ### Trimming details for a group of openings

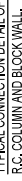


NOTE: DIMENSION (A), (B) & (C) MAY GOVERN DEPENDING ON WHICH GIVES THE LONGEST LENGTH OF SUPPORT STEEL



This diagram shows a cross-section of a wall assembly. From left to right, it consists of a structural wall, a layer of insulation (indicated by diagonal hatching), and an exterior finish. A horizontal line with an arrow points to the insulation layer, and a vertical line with an arrow points to the structural wall.

OR EVERY ALTERNATIVE LAYER (TYP)



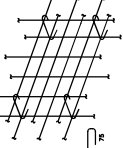
STROUPLS



(TYP 1)

TYPICAL DETAILS OF LINTELS

NOTE: FOR ALL SILLS AND UNTELS BETWEEN COLUMNS AND NOT SUPPORTED BY A WALL, PROVIDE DOWELS IN THE COLUMN OF SAME SIZE AND NUMBER AS THE REINFORCEMENT OF THE UNTEL OR SILL. THESE DOWELS SHALL EXTEND 50 BAR ϕ FROM THE FACE OF THE COLUMN AND SHALL BE EMBEDDED 50 BAR ϕ IN THE COLUMN.



**TYPICAL DETAIL FOR VERTICAL REINFORCEMENT
IN WALLS WITH HOOKS**

LINTEL BEAM LAYOUT

MURTADA
MAAZ

CONSULTANCY

MURTADA MAAZ BUILDING, OBAID KHATIM STREET
KHARTOUM - SUDAN
TEL : 094-183-78911 / 9249- 183-79326
FAX : 094-183-78911 / 9249- 183-79326
E-MAIL : MAAZ@MURTADAMAAZ.COM
WWW.MURTADAMAAZ.COM

Design Criteria:

1- Material properties:

- F_y = 460 Mpa for steel bar reinforcement.
- F_{cu} = 25 Mpa for reinforced concrete.
- F_y = 235 Mpa for all steel members.

2-Structure system:

- 2-1- Foundation system:
 - Crushed stone slip footing (fill by sand).
- 2-2- Floor system:
 - Slab on grade rest on well compacted selected material.
- 2-3 ALL BRICK WALL, mortar designation(III), minimum brick strength =5N/mm².

3- Add additives for the concrete under sewerage drain water.

01	15/12/2021	FINAL DETAIL
00	07/04/2021	FINAL DETAIL
00	17/03/2021	DRAFT DETAIL
REV	DATE	PURPOSE OF ISSUE

CLIENT:-

World Vision

WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

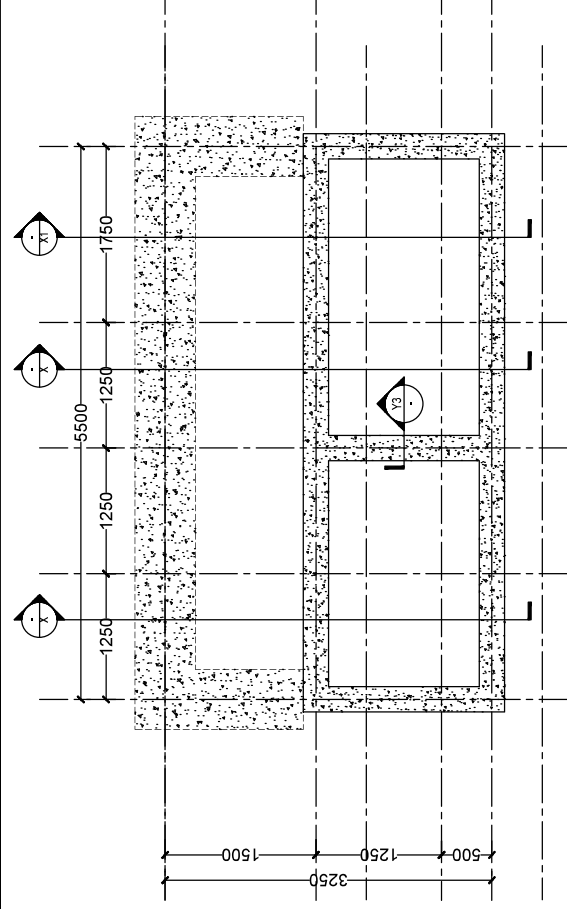
A05 SD 019 / WY SUDAN / SDBLN/1/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE :-

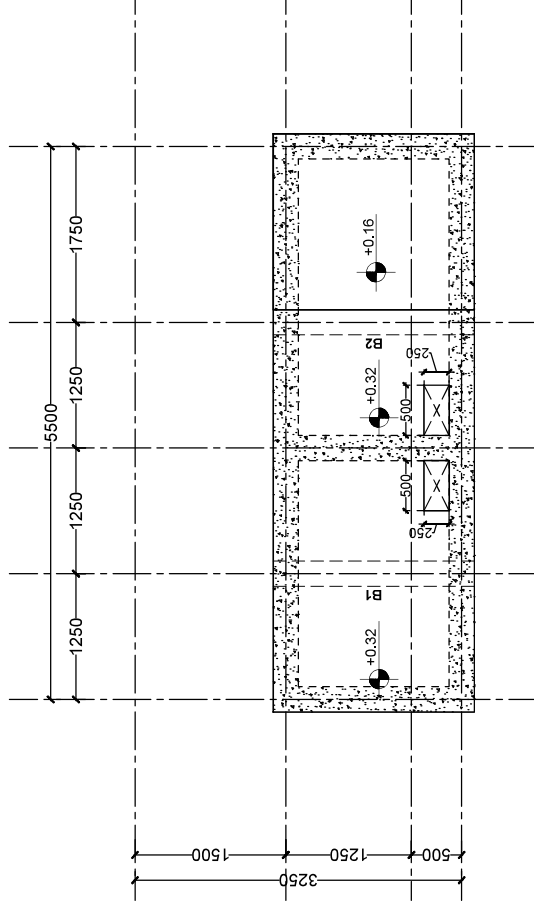
BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
CIVIL WORKS
ROOF PLAN

DESIGNED BY:	DRAWN BY:	APPROVED BY:
ADM	SSZ	AAA
DRAWING NO.	S-LAT-4-01	SHEET NO.
SCALE	1:50	2 OF 2
REVISION NO.	01	DATE
		06/04/2021

ROOF PLAN



CONCRETE PIT WALLS & STRIP FOUNDATION LAYOUT



PIT COVER SLAB LAYOUT

Design Criteria

1- Material properties:

- Fy = 460 Mpa for steel bar reinforcement.
- Fcu = 25 Mpa for reinforced concrete.
- Fy = 235 Mpa for all steel members.

2-Structure system:

- 2-1- Foundation system:
a- Grouted stone slip footing (fill by sand).
- 2-2- Floor system:
a- Slab on grade rest on well compacted selected material.
- 2-3 ALL BRICK WALL, mortar designation(III), minimum brick strength =5Nmm².
- 3- Add additives for the concrete under sewerage drain water.

01	15/12/2022	FINAL DETAIL
00	07/04/2022	FINAL DETAIL
00	17/03/2022	DRAFT DETAIL
REV	DATE	PURPOSE OF ISSUANCE

CLIENT:-

World Vision
WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLV11/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS

FOUR DOORS LATRINE (LAT-4)

CIVIL WORKS

OPTION 2 (CONCRETE PIT) WALLS,
FOUNDATION, & COVER SLAB LAYOUTS

DESIGNED BY:	DRAWN BY:	APPROVED BY:
AOM	SSZ	AAA
DRAWING NO.	SHEET NO.	
S-LAT-103	1 OF 2	
SCALE	REVISION NO.	DATE
1:50	01	05/04/2022

Design Criteria

- 1- Material properties:
- $F_y = 460$ Mpa for steel bar reinforcement
- $F_{cu} = 25$ Mpa for reinforced concrete
- $F_y = 235$ Mpa for all steel members.
- 2- Structure system:
2-1 Foundation system:
- Crushed stone slip footing (fill by sand)
2-2 Floor system:
- Slab on grade rest on well compacted selected material.
2-3 ALL BRICK WALL, mortar designation (iii), minimum brick strength = 5N/mm².
- 3- Add additives for the concrete under sewerage drain water.

REV	DATE	PURPOSE OF ISSUE
01	15/12/2022	FINAL DETAIL
01	07/04/2023	FINAL DETAIL
00	17/03/2022	DRAFT DETAIL

CLIENT:-

World Vision
WORLD VISION INTERNATIONAL - SUDAN

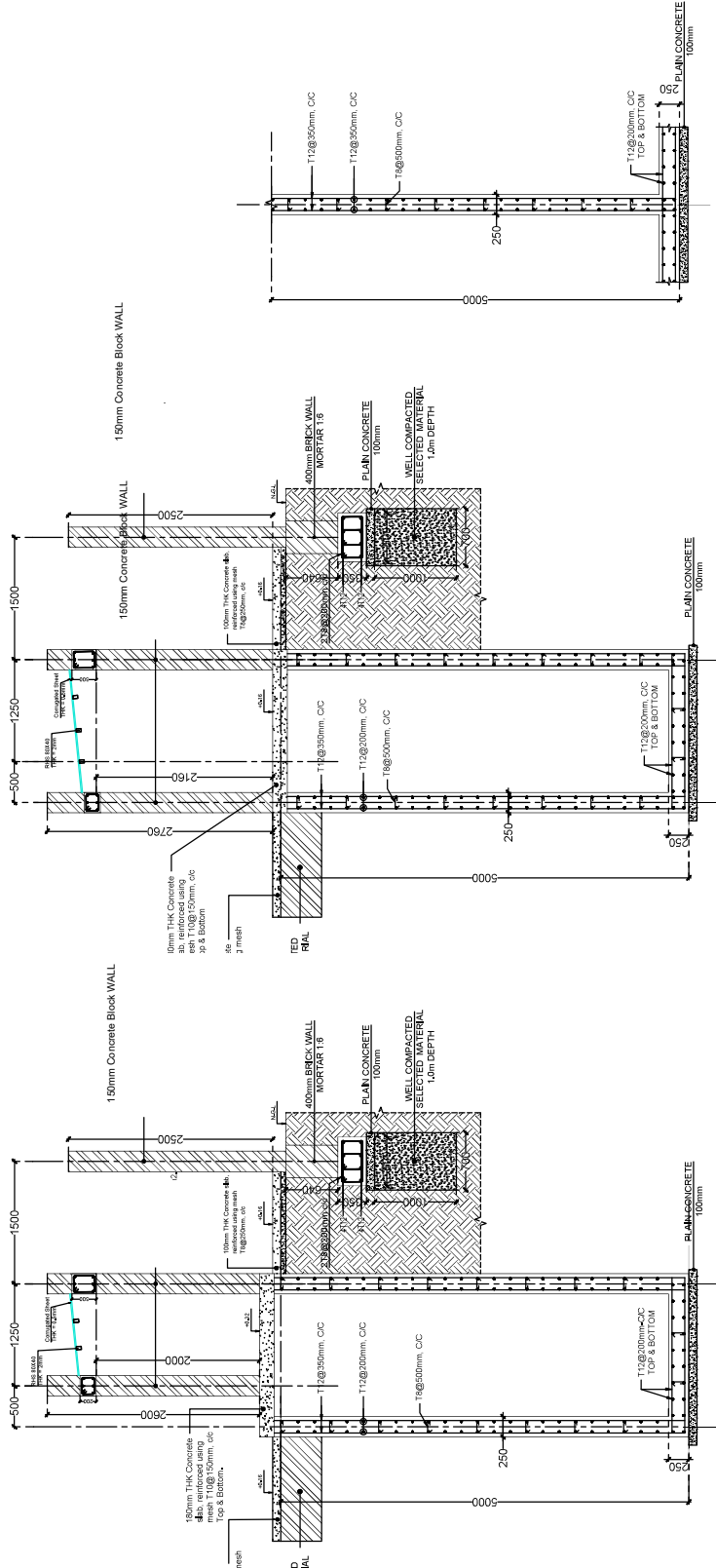
PROJECT :-

A05 SD 019 / WY SUDAN / SDBLN/11/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
CIVIL WORKS
OPTION 2 (CONCRETE PIT) SECTIONS
DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY:
AOM	SSZ	AAA
DRAWING NO.		SHEET NO.
SCALE	REVISION NO.	2 OF 2
As indicated	01	DATE
		02/04/2023

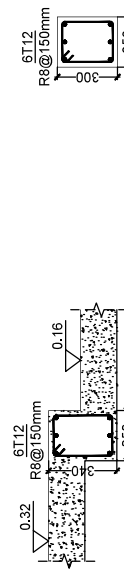


SECTION (X1)
SCALE 1:50

SECTION (Y3)
SCALE 1:50



BEAM B(1)
SCALE 1:25



BEAM (B2)
SCALE 1:25



LENTIL BEAM DETAILS
SCALE 1:25

Design Criteria:

- 1-Material properties:
 -Fy = 460 Mpa for steel bar reinforcement
 -Fcu = 23 Mpa for reinforced concrete.
 -Fy = 235 Mpa for all steel members.
- 2-Structure system:
 2-1: Foundation system:
 - Crushed stone strip footing fill by sand.
 2-2: Flooring
 - Slab on grade rest on well compacted selected material.
 2-3: ALL BRICK WALL, mortar designation (ii), minimum brick strength = 5N/mm2.
- 3-Add additives for the concrete under sewerage drain water.

	01	15/12/2022	FINAL DETAIL	
	00	07/04/2022	FINAL DETAIL	
	00	17/03/2022	DRAFT DETAIL	
	REV	DATE	PURPOSE OF ISSUANCE	

CLIENT:-



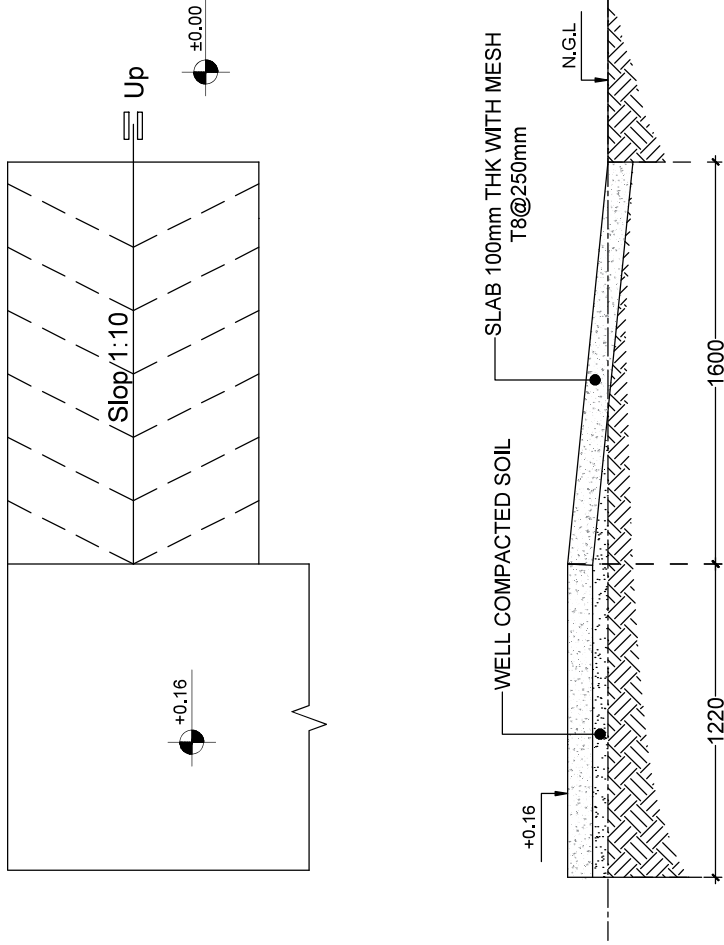
PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN/11/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
CIVIL WORKS
GENERAL RAMP DETAIL

DESIGNED BY:	AOM	DRAWN BY:	SSZ	APPROVED BY:	AAA
DRAWING NO.		SHEET NO.		1 OF 1	
SCALE	1:50	REVISION NO.	01	DATE:	DECEMBER, 2022



RAMP SECTION

NOTES :-

1. NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN MILLIMETERS & ALL LEVELS ARE IN METER FROM FLOOR FINISH.
3. BUILDER TO CHECK ALL DIMENSIONS AT SITE PRIOR TO CONSTRUCTION, ASSEMBLY OR FABRICATION OF ALL WORKS.
4. ALL WORKS ARE TO BE CARRIED OUT TO CONSTRUCTION.
5. FLOOR TILES SHOULD BE REVISED BY CONTRACTOR ACCORDING TO ACTUAL DIMENSION ON SITE.

-R.L. ROAD LEVEL
-W.L. WALK LEVEL
-F.O.S. FINISHING LEVEL
-F.F.L. FINISHING LEVEL
-F.F.L. FINISHING LEVEL
BUILD UP AREA = 40.5m²

LEGEND :-

01	15/12/2022	FINAL DETAIL
00		FINAL DETAIL
00		DRAFT DETAIL
REV	DATE	PURPOSE OF ISSUE

CLIENT:-



WORLD VISION INTERNATIONAL - SUDAN

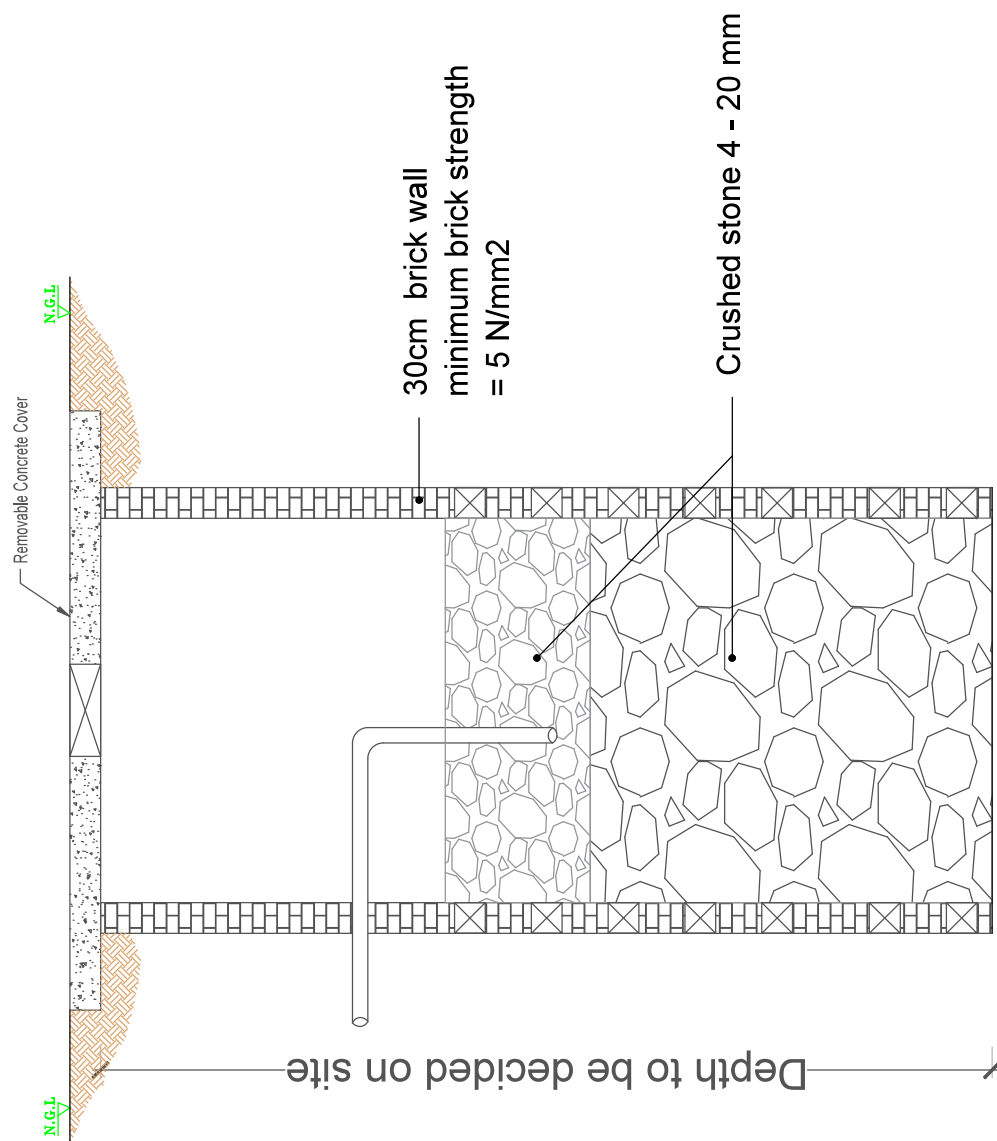
PROJECT :-

A05 SD 019 / WY SUDAN / SDBLN/1/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
TEN DOORS LATRINE (LAT-4)
HAND WASH FACILITY - CIVIL WORKS
GENERAL SOAKAWAY DETAILS

DESIGNED BY:	DRAWN BY:	APPROVED BY:
SAE	SAE	SOM
DRAWING NO.	SHEET NO.	
S-LAT-4-001	1 OF 1	
SCALE	REVISION NO.	DATE
1:50	01	20/06/2022



SOAKAWAY DETAILS

MECHANICAL DRAWINGS

GENERAL NOTES:

- 01 : ALL PPRC PIPES SHALL BE IN MILLIMETER INDICATING NOMINAL DIAMETER.
- 02 : ALL PVC PIPES SHALL BE IN MILLIMETER INDICATING NOMINAL DIAMETER.
- 03 : ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE NOTED.
- 04 : DRAWINGS ARE DIAGRAMMATIC. ALL WORKS SHALL BE EXECUTED AS PER APPROVED SHOP DRAWING.
- 05 : ALL MECHANICAL DRAWINGS SHALL BE COORDINATED WITH ELECTRICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- 06 : NO MEASUREMENT SHALL BE TAKEN FROM THESE DRAWINGS.
- 07 : MECHANICAL SERVICES SHALL NOT CUT IN ANYWAY STRUCTURAL RIBS. BEAMS OR ANY OTHER STRUCTURAL ELEMENTS UNLESS PRIOR APPROVAL IS GRANTED.
- 08 : SLEEVES SHALL BE PROVIDED ON ALL DUCTS AND PIPES PENETRATING WALLS AND WOOD FRAMES FOR ALL WALL-MOUNTED GRILLES AND EQUIPMENT.
- 09 : CONTRACTOR SHALL NOT PURCHASE ANY PIECE OF EQUIPMENT PRIOR TO ENGINEER'S APPROVAL ON THE SHOP DRAWINGS AND ALL SELECTED EQUIPMENT SUBMITTAL.
- 10 : CONTRACTOR SHALL EXECUTE ALL ELECTRICAL WORKS RELATED TO MECHANICAL SYSTEM INCLUDING ALL CONTROLS TO PROVIDE A COMPLETE AND OPERABLE SYSTEM TO THE SATISFACTION OF THE ENGINEER AND AS PER APPROVED SHOP DRAWINGS.
- 11 : CONTRACTOR TO PROVIDE FLEXIBLE CONNECTIONS ON ALL DUCTS & PIPES CROSSING EXPANSION JOINTS

- 12 : MECHANICAL CONTRACTOR TO COORDINATE BEAM AND SLOPE PENETRATIONS WITH STRUCTURAL SHOP DWGS. AND SUBMIT BUILDERS WORK FOR APPROVAL.
- 13 : ALL MECHANICALS SERVICES UNDERGROUND SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS. PROVIDE APPROVED TYPE OF WARNING TAPE BEFORE FINAL BACKFILLING.
- 14 : CONTRACTOR SHALL SUBMIT 3 SETS OF AS-BUILT DRAWING AND O & M MANUALS FOR ALL THE INSTALLED SYSTEMS AND EQUIPMENT.
- 15 : CONTRACTOR IS RESPONSIBLE TO PROVIDE EXPANSION AND CONTRACTION COMPENSATOR FITTINGS FOR ALL MECHANICAL SYSTEMS AND EQUIPMENTS INSTALLED ACROSS THE EXPANSION JOINT IN STRUCTURAL FRAMING.
- 16 : CONTRACTOR IS RESPONSIBLE TO SUBMIT MECHANICAL SYSTEM METHOD OF STATEMENT FOR APPROVAL
- 17 : CONTRACTOR IS RESPONSIBLE TO SUBMIT ALL MECHANICAL MATERIALS FOR APPROVAL
- 18 : CONTRACTOR IS RESPONSIBLE TO SUBMIT (3 SETS) OF MECHANICAL SYSTEM SHOP DRAWINGS COORDINATION DRAWINGS FOR APPROVAL WITH IN (4 WEEK FROM THE PROJECT CONTRACT
- 19 : CONTRACTOR IS RESPONSIBLE TO SUBMIT ALL MECHANICAL MATERIALS FOR INSPECTION TO SITE
- 20 : CONTRACTOR IS RESPONSIBLE TO SUBMIT SAMPLE OF EACH NEW MECHANICAL INSTALLATION WORK FOR APPROVAL

01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DRAFT DETAIL
REV	DATE	PURPOSE OF ISSUANCE

CLIENT :-



WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN1712021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

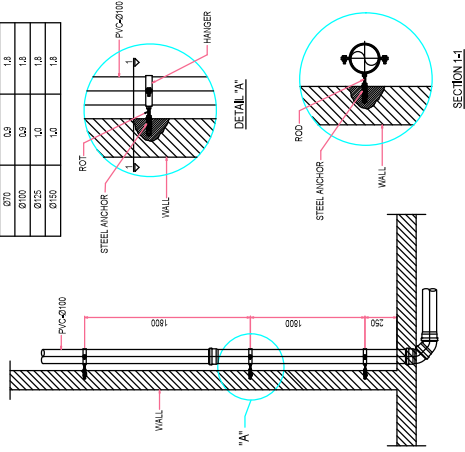
DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
MECHANICAL WORKS
GENERAL NOTES

DESIGNED BY:	DRAWN BY:	APPROVED BY:
N.A.A	N.A.A	A.A.A
DRAWING NO.		SHEET NO.
MA-LAT-4-00		1 OF 1
SCALE	PROJECT NO.	DATE
NTS	01	DECEMBER, 2022

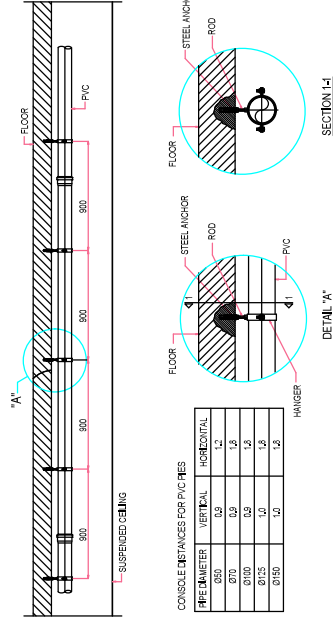
CONSISTANT DISTANCES FOR PVC PIPES

PIPE DIAMETER	VERTICAL	HORIZONTAL
Ø50	0.9	1.2
Ø75	0.9	1.8
Ø100	0.9	1.8
Ø125	1.2	1.8
Ø150	1.2	1.8



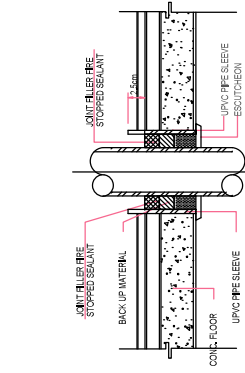
PVC PIPE SUPPORT DETAIL (ON WALL)

SCALE: N.T.S.



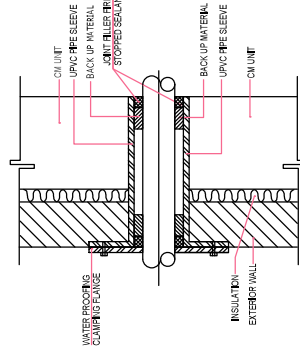
PVC PIPE SUPPORT DETAIL (SUSPENDED CEILING)

SCALE: N.T.S.



PIPE SLEEVE THRU FLOOR

SCALE: N.T.S.



PIPE SLEEVE THRU EXTERIOR WALL
OR FOUNDATION WALL (BELOW GRADE)

SCALE: N.T.S.

01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DRAFT DETAIL
REV	DATE	PURPOSE OF ISSUANCE

CLIENT:-


 World Vision
 WORLD VISION INTERNATIONAL - SUDAN

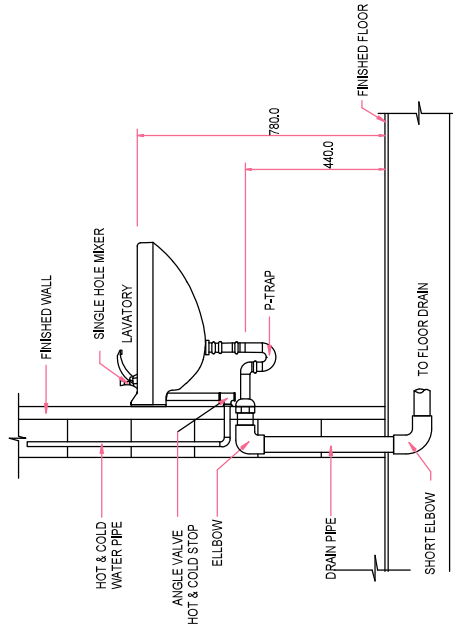
PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN11/2021
 WASH AND BUILDING INFRA-STRUCTURE
 IN SUDAN

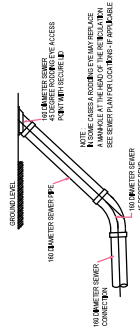
DRAWING TITLE:-

BUILDING WORKS
 FOUR DOORS LATRINE (LAT-4)
 MECHANICAL WORKS
 MECHANICAL DETAILS (SHEET 1 OF 3)

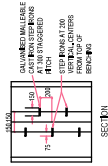
DESIGNED BY:	DRAWN BY:	APPROVED BY:
N.A.A	N.A.A	A.A.A
DRAWING NO.	SHEET NO.	
MD-LAT-4-01	1 OF 3	
SCALE	REVISION NO.	DATE
NTS	01	DECEMBER, 2022



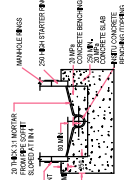
LAVATORY DETAILS
 SCALE N.T.S



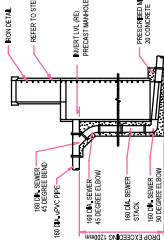
DETAIL OF SEWER RODDING EYE
 SCALE 1/2"=1'-0"



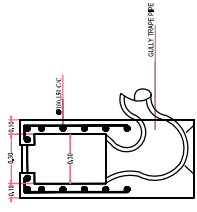
DETAIL OF STEP RINGS
 SCALE 1/2"=1'-0"



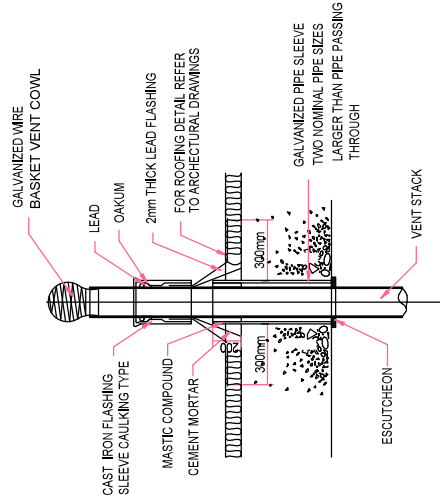
DETAIL OF BENCHING
 SCALE 1/2"=1'-0"



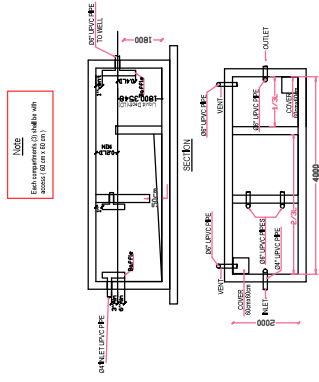
CONVENTIONAL DEEP CONNECTIONS
 SCALE 1/2"=1'-0"



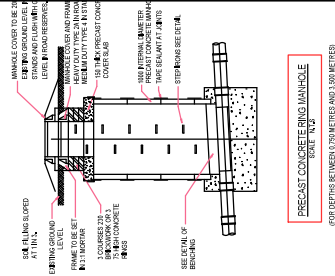
GULLY TRAP DETAILS
 SCALE 1/2"=1'-0"



VENT STACK (ROOF TERMINAL DETAIL)
 SCALE N.T.S

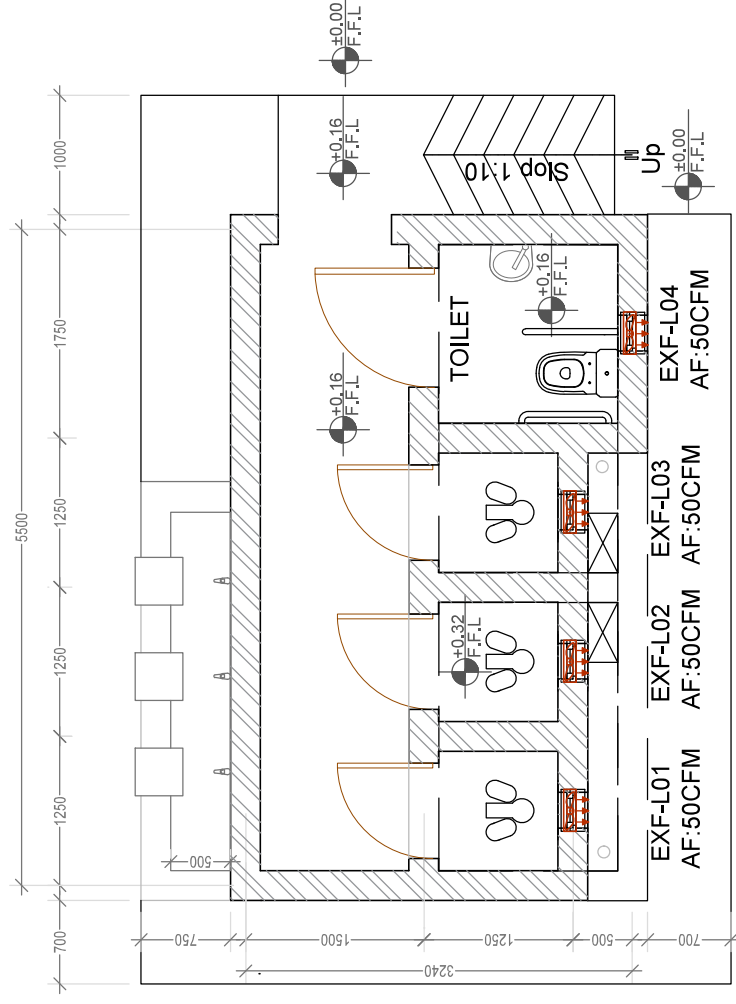


SEPTIC TANK DETAIL
 SCALE 1/2"=1'-0"



PRECAST CONCRETE RING MANHOLE
 SCALE 1/2"=1'-0"

01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DRAFT DETAIL
REV	DATE	PURPOSE OF ISSUANCE
CLIENT :-		
 World Vision WORLD VISION INTERNATIONAL - SUDAN		
PROJECT :-		
A05 SD 019 / WW SUDAN / SOBLV11/2021		
WASH AND BUILDING INFRA-STRUCTURE IN SUDAN		
DRAWING TITLE:-		
BUILDING WORKS		
FOUR DOORS LATRINE (LAT-4)		
MECHANICAL WORKS		
MECHANICAL DETAILS (SHEET 2 OF 3)		
DESIGNED BY:	DRAWN BY:	APPROVED BY:
N.A.A	N.A.A	A.A.A
DRAWING NO.	SHEET NO.	
MD-LAT-4-02	20F3	
SCALE	PROJECT NO.	DATE
NTS	01	DECEMBER, 2022



UNIT(4)

VENTILATION SYSTEM

REV	DATE	PURPOSE OF ISSUE
01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DRAFT DETAIL

CLIENT:-

World Vision
WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN112021
WASH AND BUILDING INFRASTRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
MECHANICAL WORKS
VENTILATION SYSTEM

DESIGNED BY:	DRAWN BY:	APPROVED BY:
N.A.A	N.A.A	A.A.A
DRAWING NO.	SHEET NO.	
MM/LAT-4-01	1 OF 3	
SCALE	REVISION NO.	DATE
1:100	01	DECEMBER, 2022

NOTES & LEGEND:-

1. ALL DIMENSION ON MILLIMETER UNLESS OTHERWISE SPECIFIED.
2. FOR MECHANICAL DETAILS & INSTALLATION REFER TO MECHANICAL DETAILS DRAWING.
3. FOR CONSTRUCTION DETAILS REFER TO STRUCTURAL DRAWINGS.
4. ALL THE SIZES (PPR PIPES) PRESENTED IN THE OUTER DIAMETER (PH 20).

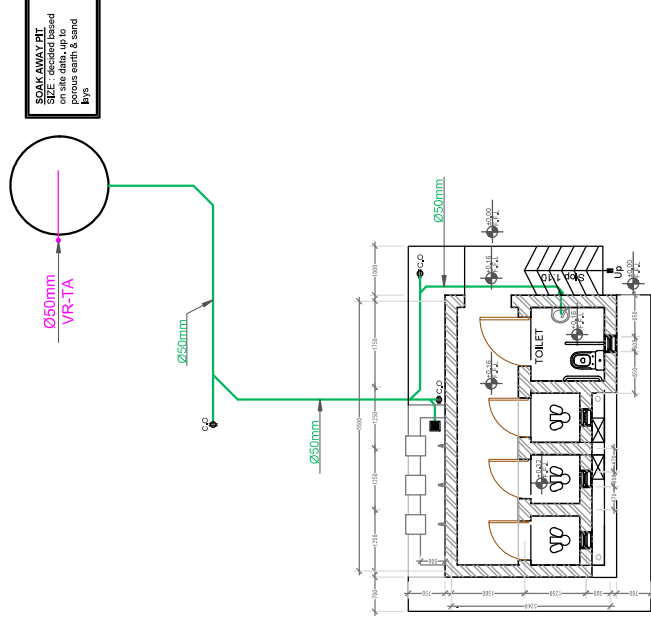
DRAINAGE:-

- WASTE WATER PIPE
- WASTE WATER RISER
- FLOOR DRAIN
- FLOOR CLEAN OUT
- C.O

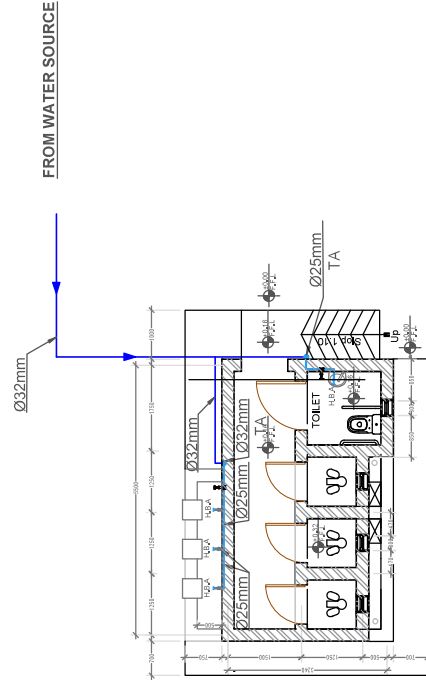
PIPE SIZE	SLOPE
Ø75	1.0%
Ø90	2.2%

WATER SUPPLY:-

- H&A HAND WASH BASIN ACCESSORIES
- TA TO ABOVE
- DOMESTIC WATER RISER
- PPR COLD WATER PIPE RUN INSIDE WALL
- PPR COLD WATER PIPE RUN UNDER GROUND
- INSULATING VALVE
- GATE VALVE



UNIT (4)
DRAINAGE SYSTEM



UNIT (4)
WATER SUPPLY SYSTEM

REV	DATE	PURPOSE OF ISSUE
01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DRAFT DETAIL

CLIENT :-

World Vision
WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN712021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
MECHANICAL WORKS
DRAINAGE & WATER SUPPLY SYSTEMS

DESIGNED BY:	DRAWN BY:	APPROVED BY:
N.A.A	N.A.A	N.A.A
DRAWING NO.	SHEET NO.	
MM/LAT-402	20F3	
SCALE	REVISION NO.	DATE
1:100	01	DECEMBER, 2022

NOTES & LEGEND:-

1. ALL DIMENSION ON MILLIMETER UNLESS SPECIFIED OTHERWISE.
2. FOR MECHANICAL DETAILS & INSTALLATION REFER TO MECHANICAL DETAILS DRAWING.
3. FOR CONSTRUCTION DETAILS REFER TO STRUCTURAL DRAWINGS.
4. ALL THE SIZES (PPR PIPES) PRESENTED (THE OUTER DIAMETER) (PH 20).

DRAINAGE:-

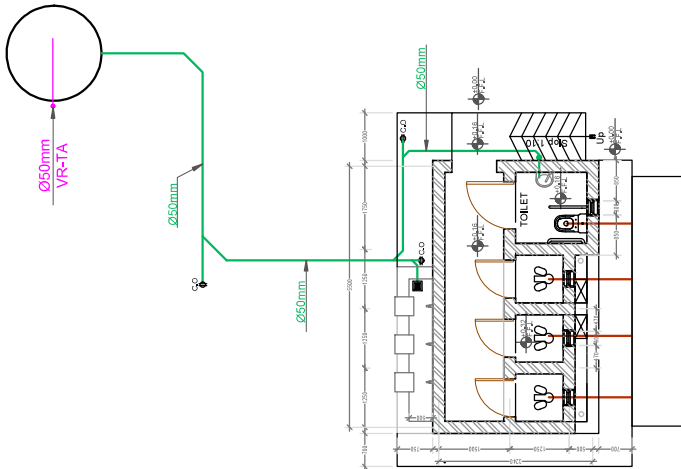
- WASTE WATER PIPE
- WASTE WATER RISER
- FLOOR DRAIN
- FLOOR CLEAN OUT
- C.O

PIPE SIZE	SLOPE
Ø75	1.0%
Ø90	2.2%

WATER SUPPLY:-

- H.E.A HAND WASH BASIN ACCESSORIES
- TA TO ABOVE
- DOMESTIC WATER RISER
- PPR COLD WATER PIPE RUN INSIDE WALL
- PPR COLD WATER PIPE RUN UNDER GROUND
- INSULATING VALVE
- GATE VALVE

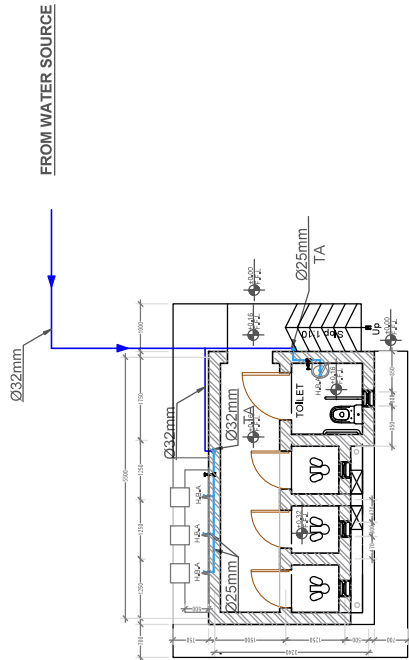
SOAK AWAY PIT
SIZE - decided based
on site data, up to
porous earth & sand
layer



UNIT (4)

DRAINAGE SYSTEM

LATRINE PIT
SIZE - decided based
on site data, up to
porous earth & sand
layer



UNIT (4)

WATER SUPPLY SYSTEM

REV	DATE	PURPOSE OF ISSUANCE
01	15/12/22	DETAILED FINAL
00	07/04/22	DETAILED FINAL
00	17/03/22	DRAFT DETAIL

CLIENT:-

World Vision
WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN712021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
MECHANICAL WORKS
DRAINAGE & WATER SUPPLY SYSTEMS
POUR-FRUSH

DESIGNED BY:	DRAWN BY:	APPROVED BY:
N.A.A	N.A.A	A.A.A
DRAWING NO.	SHEET NO.	
MM/LAT-423	30F3	
SCALE	REVISION NO.	DATE
1:100	01	DECEMBER, 2022

GENERAL ELECTRICAL NOTES

- 1: THE ELECTRICAL INSTALLATIONS HEREIN SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, NFPA89 AND IEE .
- 2: THE TYPE OF POWER SERVICE TO BE SUPPLIED SHALL BE 415V, 3PH, 50 HERTZ.
- 3: THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF EXISTING POWER SUPPLY AND ALSO THE ACTUAL LOCATION OF THE EXISTING TELEPHONE CABLE FACILITIES FOR CONNECTION.
- 4: THE CONTRACTOR SHALL COORDINATE THE LOCATION OF LIGHTING FIXTURES WITH MECHANICAL AND OTHER DEVICES TO BE INSTALLED IN CEILING.
- 5: UNLESS OTHERWISE SPECIFIED THE MINIMUM SIZE OF WIRE AND CONDUIT SHALL BE 2.5MM SQ. COPPER AND 20 MMØ DIAMETER RESPECTIVELY.
- 6: ALL SERVICE ENTRANCE EQUIPMENT SUCH AS POWER AND LIGHTING PANELS SHALL BE PROPERLY CONNECTED TO BUILDING earth GRID.
- 7: Earth ALL METALLIC CONDUITS, STRUCTURAL STEEL SUPPORTS, CABINETS AND EQUIPMENT IN ACCORDANCE WITH THE NEG. EARTH MOTOR BASES AND FRAMES BY PULLING A SEPARATE CONDUCTOR WITH THE MOTOR FEEDER.
- 8: METALLIC CONDUITS OR DUCTS SHALL CONTAIN AN INSULATED GROUNDING CONDUCTOR.
- 9: MAKE FIRM GROUND TO WIRING SYSTEM. GROUND CONDUCTORS AS INDICATED ON THE DRAWINGS MUST BE CONTINUOUS FROM ORIGIN TO TERMINATION AND PROPERLY BONDED WITH LUGS AT BOTH ENDS.
- 10: ALL MATERIALS TO BE USED SHALL BE NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE.
- 11: STANDARD TYPES OF ACCESSORIES, SPlicing DEVICES, TERMINATION AND OTHER APPARATUS FOR THE ENTIRE ELECTRICAL INSTALLATIONS SHALL BE USED.
- 12: LIGHT SWITCHES SHALL BE MOUNTED .20 M. FROM FINISHED FLOOR LEVEL UNLESS OTHERWISE INDICATED.
- 13: POWER SOCKETS SHALL BE MOUNTED 0.5 M. FROM FINISHED FLOOR LEVEL UNLESS OTHERWISE INDICATED.
- 14: TOP OF THE DISTRIBUTION PANELS SHALL BE 1.6M FROM FINISH FLOOR. WALL MOUNTED LIGHTING FIXTURES INCLUDING EXIT SIGN SHALL BE 0.2M ABOVE DOOR LINE. SOCKET FOR SPLIT UNIT SHALL BE 1.6M FROM FINISH FLOOR.
- 14: ALL CONDUITS AND WIRERAYS LOCATED AND/OR INDICATED ARE DIAGRAMATIC; EXACT LOCATIONS IN ROOMS, WALL PENETRATIONS, ETC., SHALL BE DETERMINED BY THE ENGINEER AT THE JOB SITE.
- 16: PROVIDE 2025 MMØ DIAMETER EMPTY CONDUIT STUB-UP WITH CAPS INSIDE CEILING FROM ALL FLUSH MOUNTED PANELBOARDS CORRESPONDING TO THE NUMBER OF SPARE 1520 AMPERE BRANCH CIRCUIT.

- 17: THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSULT AND COORDINATE POWER SERVICE REQUIREMENTS OF THE PROJECT.
- 18: ALL FLUORESCENT LIGHTING FIXTURES SHALL BE PROVIDED WITH HIGH POWER FACTOR. THERMAL PROTECTOR AND ELECTRONIC BALLAST OF THE CORRECT RATING, CORRESPONDING TO THE NUMBER OF FLUORESCENT LAMPS ATTACHED TO THE FIXTURE HOUSING, UNLESS OTHERWISE NOTED.
- 19: THE STANDARD SIZE OF WIRE TO BE USED SHALL BE IN METRIC STANDARD (SI UNITS).
- 20: ALL WIRES AND CABLES PASSING FROM ROOM TO ROOM SHALL BE PROVIDED WITH SLEEVES AND SEALED TO PREVENT PASSAGE OF AIR/MOISTURE.
- 21: UNLESS OTHERWISE INDICATED, SIZE OF BRANCH CIRCUIT WIRES SHALL BE AS FOLLOWS:
- | | |
|---------------|------------------------------|
| BRANCH C.B.R. | BRANCH C.C.T. WIRE |
| 10/15A | 2.5 SQ.MM GRD. 2.5 SQ.MM PVC |
| 20A | 4.0 SQ.MM GRD. 4.0 SQ.MM PVC |
| 32A | 6.0 SQ.MM GRD. 6.0 SQ.MM PVC |
- 22: ALL MAIN AND BRANCH BREAKERS OF SWITCHBOARDS SHALL BE MOULDED CASE CIRCUIT BREAKER (MCCB)
- 23: ALL LIGHT FIXTURES IN AREAS SUBJECT TO WET/DAMP LOCATIONS LIKE KITCHEN & LAUNDRY SHALL HAVE MINIMUM PROTECTION DEGREE OF "IP44", AND MINIMUM PROTECTION DEGREE OF "IP54" FOR OUTDOOR
- 24: VERIFY LOCATIONS AND RATINGS OF ALL MECHANICAL EQUIPMENT/THERMOSTATS AT SITE AND AS PER MECHANICAL PLANS PRIOR TO EXECUTION OF ELECTRICAL WORKS.
- 25: CONTRACTOR IS TO CHECK ALL VOLTAGE DROP IN SYSTEM AGAINST CABLE SIZE/LENGTH, VOLTAGE DROP ANYWHERE IN TOTAL SYSTEM FROM POWER SOURCE TO CONSUMER ON EACH CIRCUIT SHALL NOT EXCEED 4% .
- 26: EARTH RESISTANCE ANYWHERE IN THE SYSTEM SHALL NOT EXCEED 5 OHMS.
- 27: CONTRACTOR TO SUBMIT SHOP DRAWING FOR ALL SYSTEMS FOR APPROVAL PRIOR TO EXECUTION OF WORK.
- 28: ALL EQUIPMENT COMPONENTS SHALL BE RATED TO OPERATE AT 50°C AMBIENT TEMPERATURE.
- 29: THE NUMBER OF WIRES INSIDE EACH CONDUIT SHALL BE AS RECOMMENDED STANDARD.
- 30: CONFIRM FRAME SIZES OF ALL BREAKERS WITH RESPECT TO CABLE SIZES.
- 31: CONTRACTOR TO CHECK SHORT CIRCUIT LEVEL AT ALL SWITCH/PANELBOARD PRIOR TO ORDERING OF THE ABOVE.
- 32: ALL DISTRIBUTION BOARDS SHALL BE RATED FOR TOTAL CONNECTED LOADS BEFORE A DIVERSITY FACTOR IS APPLIED.
- 33: COORDINATE LOCATIONS OF ALL PANTRY EQUIPMENT AT SITE AND THEIR RATINGS TO MATCH ELECTRICAL WORKS.

- 34: ALL STRUCTURES NEED TO BE EARTHED AS PER IEE.
- 35: CHECK FURNITURE LAYOUT PRIOR TO ROUGH-IN WORKS.
- 36: WHILE WIRING OF FIXTURES, ALL WIRES SHALL BE SPICED AT FIXTURES.
- 37: THE ENTIRE 11KV/415V POWER NETWORK SHOULD BE INSPECTED BY CONTRACTOR WITH ENGINEERS WRITTEN APPROVAL WHEN TESTED & COMMISSIONED BY MANUFACTURERS REPRESENTATIVE.
- 38: EACH MOTOR OR ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH NO-LOAD ISOLATING SWITCH BESIDE ITS LOCATION.
- 39: VERIFY SUFFICIENT SPACE AVAILABILITY IN SHAFTS/CHASES FOR LOW VOLTAGE BUS DUCTS/CABLES & LOW CURRENT CABLES.
- 40: CABLES AND WIRES FOR INTERNAL INSTALLATIONS SHALL BE RATED 750/450 VOLTS. CABLES FOR OUTSIDE INSTALLATIONS SHALL BE RATED 1000/600 VOLTS.
- 41: CABLES FOR SPLIT UNITS MUST BE CONNECTED TO SEPARATE BREAKERS IN DISTRIBUTION PANEL (FOR EACH) WITH MINIMUM SIZE OF WIRE 6 SQ.MM COPPER AND 32A CIRCUIT BREAKER.
- 42: CIRCUIT BREAKERS SUPPLYING POWER TO AIR HANDLING AND FAN COIL UNITS ARE PROVIDED WITH SHUNT TRIP AND ARE INTERLOCKED WITH FIRE ALARM SYSTEM TO - TRIP IN CASE OF FIRE.
- 43: LOW CURRENT AND COMMUNICATION CABLES SHALL HAVE SEPARATE RACEWAYS & TO BE SEGREGATED FROM LOW VOLTAGE CABLES.
- 43: ALL CONDUIT RUNS IMBEDDED IN CONCRETE AND CONDUITS INSIDE DOUBLE WALL PARTITIONS TO BE POLYVINYL CHLORIDE (PVC) TYPE.
- 44: a) THE MINIMUM SIZE OF THE SHEET FOR DRAWING SHOULD BE A3.
- b) SHOP DRAWING SHOULD BE TO SCALE AND DIMENSIONS.
- c) SECTION , DETAILS AND VIEWS TO BE PROVIDED IN THE SHOP DRAWING.

- NOTES:-
01. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
02. THE EXACT LOCATION OF ALL ELECTRICAL EQUIPMENTS AND PARTS SHALL BE DECIDED AT SITE IN SHOP DRAWING.
03. THE MINIMUM SIZE OF THE SHEET FOR SHOP DRAWING SHALL BE A3.
04. SHOP DRAWING SHOULD BE TO SCALE AND DIMENSIONS.
05. FOR THE LIGHT FIXTURES DESCRIPTION REFER TO PAGE NO. ELE
06. FOR THE LIGHT FIXTURES SHALL NOT ACCEPT LOW-BAY LAMPS WITH HERE VARIANTE THAN SHOWN ON THE DRAWING HEREIN.

TYPE	SYMBOL	DESCRIPTION
1		ONE GANG SWITCH
2		TWO GANG SWITCH
3		TWO GANG SWITCH WEATHER PROOF
4		ONE GANG SWITCH WEATHER PROOF
5		ONE GANG SWITCH WEATHER PROOF
6		TWO GANG SWITCH WEATHER PROOF
7		TWO GANG SWITCH WEATHER PROOF
8		TWO GANG SWITCH WEATHER PROOF
9		TWO GANG SWITCH WEATHER PROOF
10		TWO GANG SWITCH WEATHER PROOF
11		TWO GANG SWITCH WEATHER PROOF

CLIENT:-



WORLD VISION INTERNATIONAL - SUDAN

PROJECT:-

A05 SD 019 / WW SUDAN / SDBLN/11/2021
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
ELECTRICAL WORKS
GENERAL NOTES

DESIGNED BY:	DRAWN BY:	APPROVED BY:
SAE	SAE	SOM
DRAWING NO.	SHEET NO.	
E-LAT-4-00	1 OF 1	
SCALE	REVISION NO.	DATE.
N.T.S	00	APRIL 2022

ELECTRICAL DRAWINGS

TYPE	SYMBOL	DESCRIPTION
1		ONE GANG SWITCH
2		BUTTED, BUT WEATHER PROOF
3		TWO GANG SWITCH
4		BUTTED, BUT WEATHER PROOF
5		TRIPLE GANG SWITCH
6		TWO WAY ONE GANG SWITCH
7		BUTTED, BUT WEATHER PROOF
8		TWO WAY TWO GANG SWITCH
9		BUTTED, BUT WEATHER PROOF
10		THREE GANG SWITCH
11		FAIR SWITCH

00	07/04/22		DETAILED FINAL	
00	17/03/22		DETAILED DRAFT	
REV.	DATE		PURPOSE OF ISSUANCE	

CLIENT:-



WORLD VISION INTERNATIONAL - SUDAN

PROJECT :-

A05 SD 019 / WV SUDAN / SDBLN/11/2021

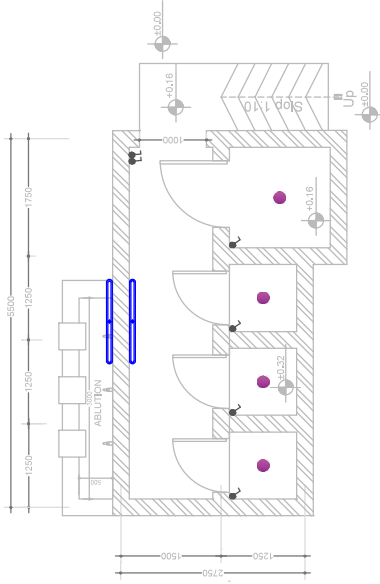
WASH AND BUILDING INFRA-STRUCTURE
IN SUDAN

DRAWING TITLE:-

BUILDING WORKS
FOUR DOORS LATRINE (LAT-4)
ELECTRICAL WORKS
LIGHTING PLAN

DESIGNED BY:	DRAWN BY:	APPROVED BY:
SAE	SAE	SOM
DRAWING NO.		SHEET NO.
EL-JAT-4-01		10F1
SCALE	REVISION NO.	DATE.
1:75	00	APRIL 2022

TYPE	SYMBOL	DESCRIPTION
1		E 1000 UPM as ABLIGHT P-60, 400K-42W, 4000lm, surface mounted, code EUPM-1000-40-0, equivalent and approved.
2		FIFTY FET AS THE UNIT, P-60, 100K-33WATT, 2,000 FT/24 IN/W, SURFACE MOUNTED, UP EQUIPMENT



UNIT(4)